

# KDHE Update from the Bureau of Epidemiology and Public Health Informatics

Sheri Anderson, MPH, MS, Senior Epidemiologist  
Jena Callen, Medical Investigator  
Amie Worthington, Medical Investigator  
Elizabeth Lawlor, MS Epidemiologist

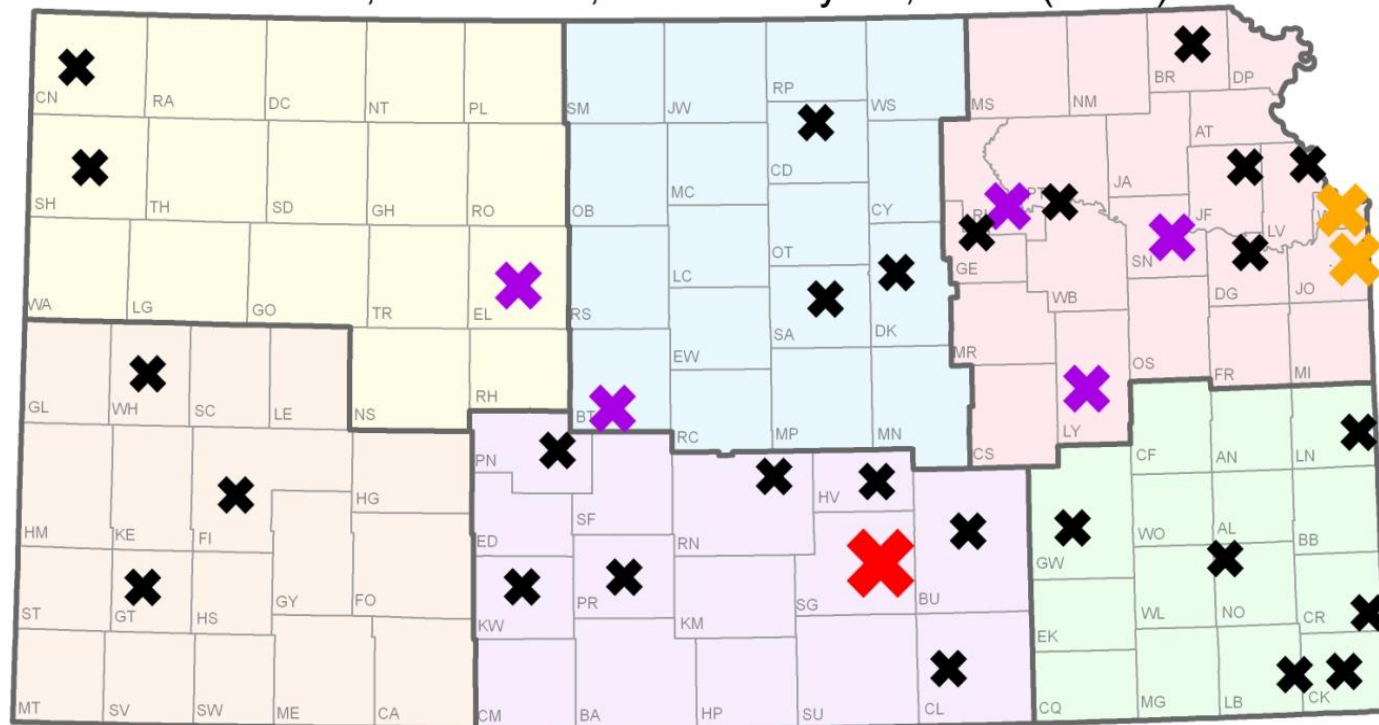
# Program Updates

- INFLUENZA SURVEILLANCE
- IMMUNIZATION ASSESSMENTS
- VACCINE PREVENTABLE DISEASE INVESTIGATIONS/OUTBREAKS
- PERINATAL HEPATITIS B

# KANSAS INFLUENZA SURVEILLANCE

- Influenza is not a nationally notifiable disease.
- Influenza surveillance in Kansas consists that provide data on outpatient influenza-like illness and circulating influenza viruses

# Sites enrolled in the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Kansas, October 3, 2010 - May 21, 2011 (n=47)



ILI Net Clinics Available

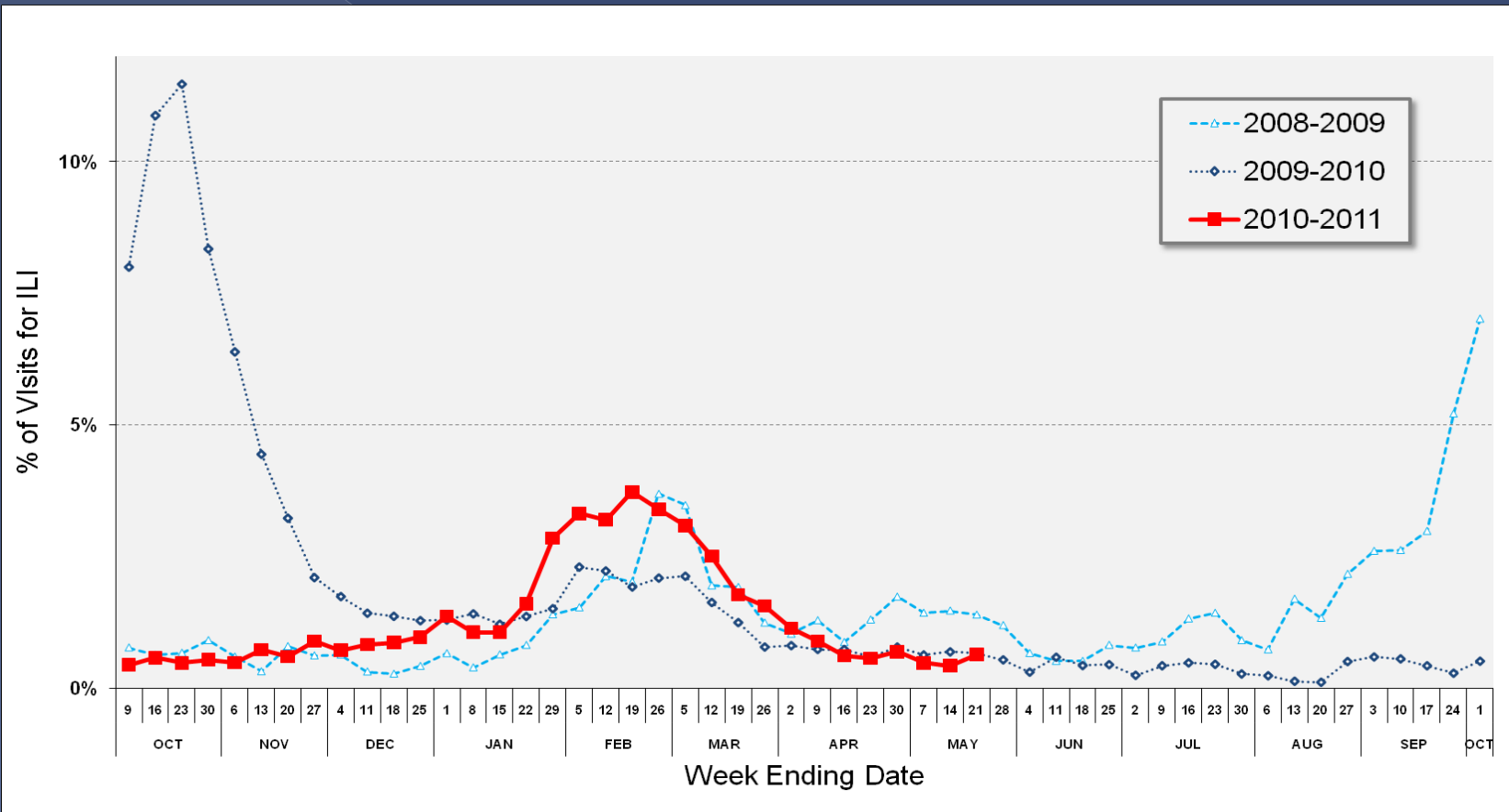
✖ 1  
 ✖ 2  
 ✖ 3  
 ✖ 4

ILI Net Regions

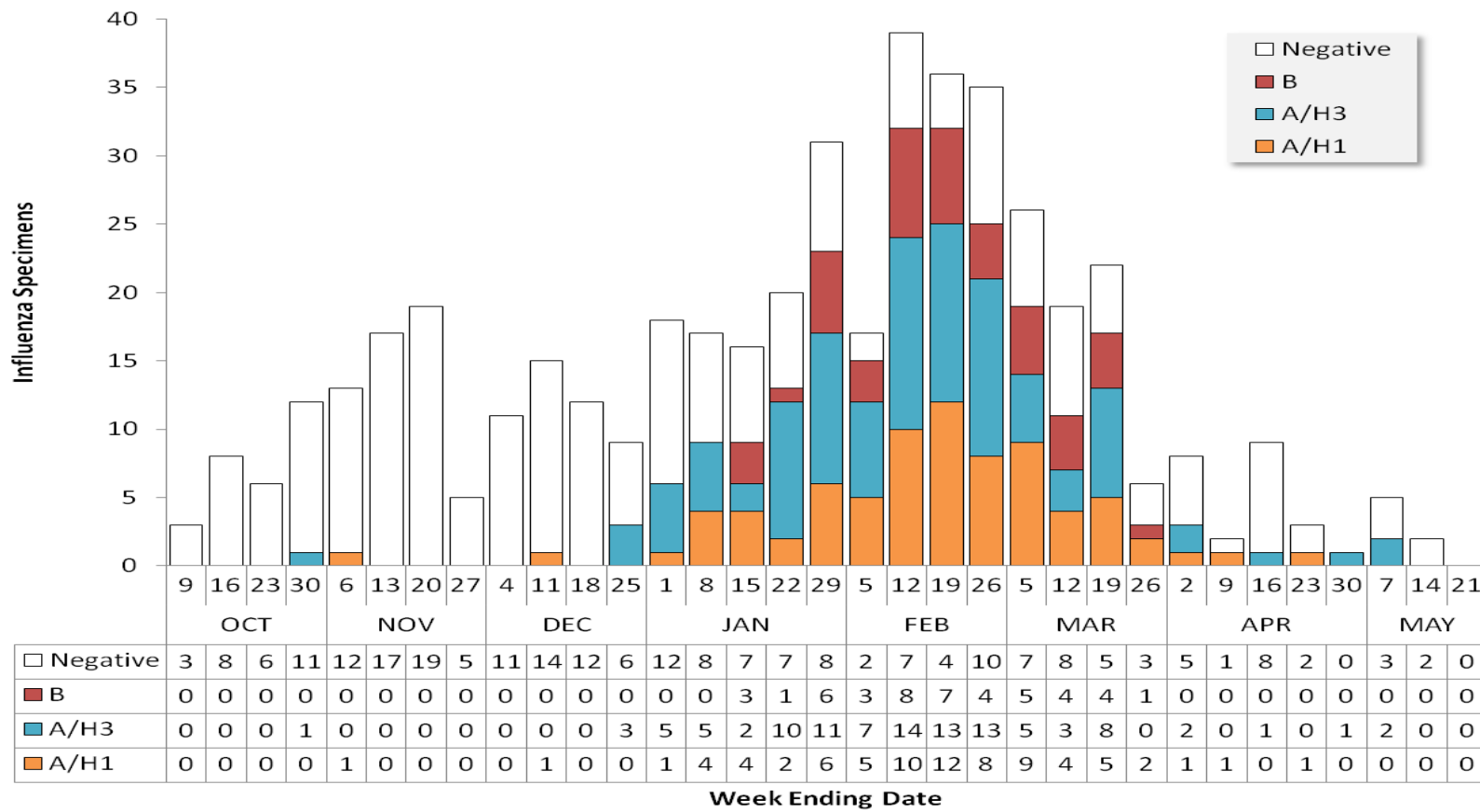
The purpose of this publication is to illustrate ILINet distribution across Kansas and does not measure the severity of influenza activity. This map product is provided without representation or implied or expressed warranty of accuracy for any uses beyond those expressed. The originating agencies are not responsible for publication or use of this product for purposes other than those expressed.

Data Sources: KS Depart. of Health and Environment

# Percentage of Visits for Influenza-like Illness (ILI) Reported by ILINet Sites, Kansas



# Influenza Specimens tested and Strains Circulating by Week



# Immunization Assessments

To Protect the Health and Environment of all Kansans by Promoting Responsible Choices



# Background

- Long-standing study performed by KDHE
- Objective: evaluate immunization coverage levels for Kansas children
- Immunization Goals – Healthy People 2010 (HP2010)
  - > ≥95% coverage for kindergarten immunizations (DTaP5, Polio4, MMR2, HepB3, Var2)
  - > ≥90% coverage for 2 year old immunizations (DTaP4, Polio3, MMR1, Hib3, HepB3, Var1)
  - > ≥80% coverage for complete 4-3-1-3-3 series at 2 years old



# Retrospective Study

- 3 vaccinations (MMR1, HepB3, Polio3) meet HP2010 goals
- Only 3 immunizations (Hib3, Var1, PCV3) increased from 2009-2010
- DTaP4 remains low, and most frequently missed series of 4-3-1-3-3
- Similar results between NIS and retrospective study
  - Hib3 and PCV3 may not be reported fully by schools

[http://www.kdheks.gov/immunize/retro\\_survey.html](http://www.kdheks.gov/immunize/retro_survey.html)

# Kindergarten Study

- Immunization levels increase 30 days following school entry
- Significant differences between public and private school coverage
- Most immunizations are below HP2010 goals
- Exemptions are approximately 1% of kindergarten population

[http://www.kdheks.gov/immunize/kindergarten\\_coverage.htm](http://www.kdheks.gov/immunize/kindergarten_coverage.htm)

# Middle and High School Study

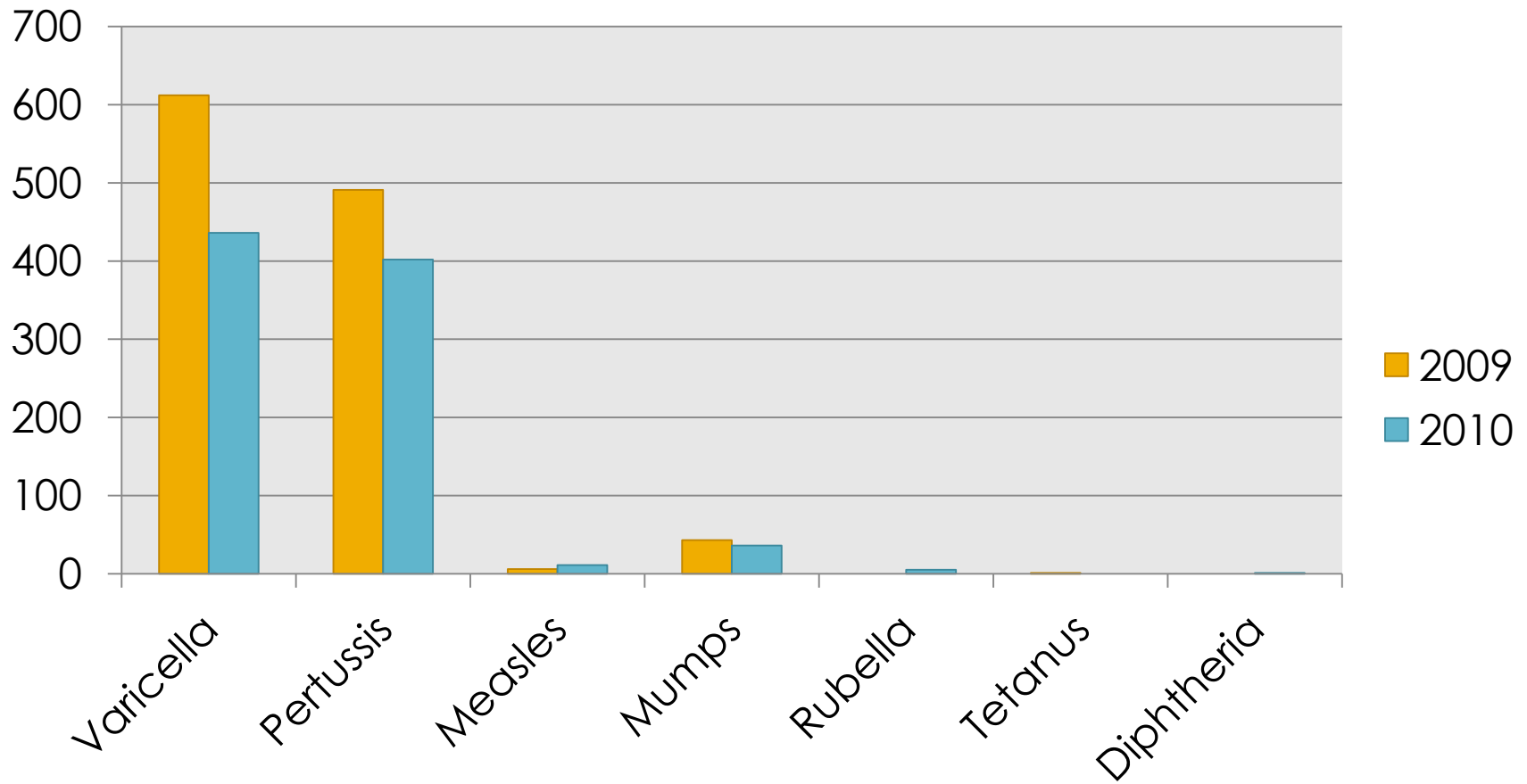
- Analysis is underway for 2009-2010 school year

# Vaccine Preventable Diseases

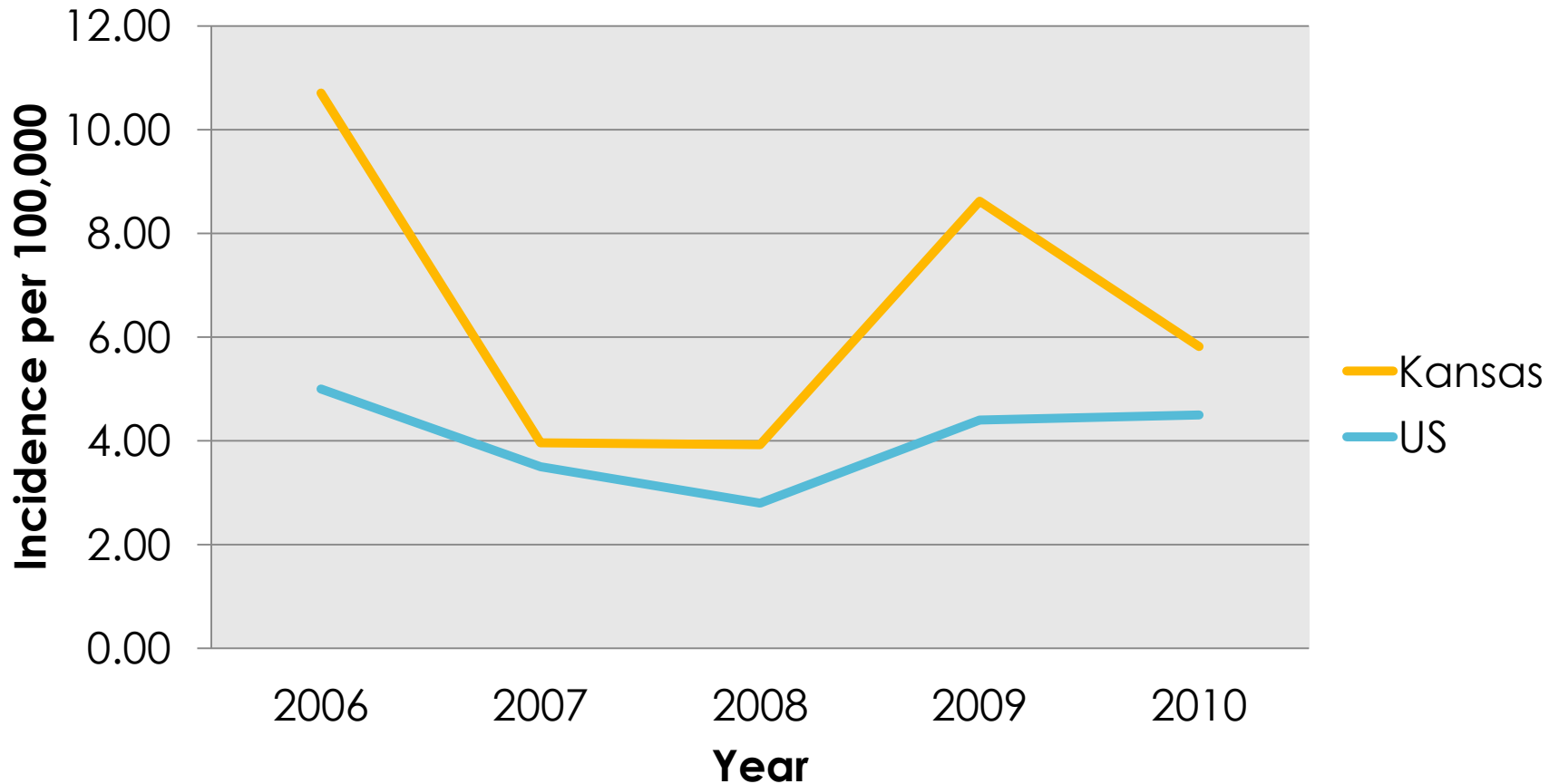
To Protect the Health and Environment of all Kansans by Promoting Responsible Choices



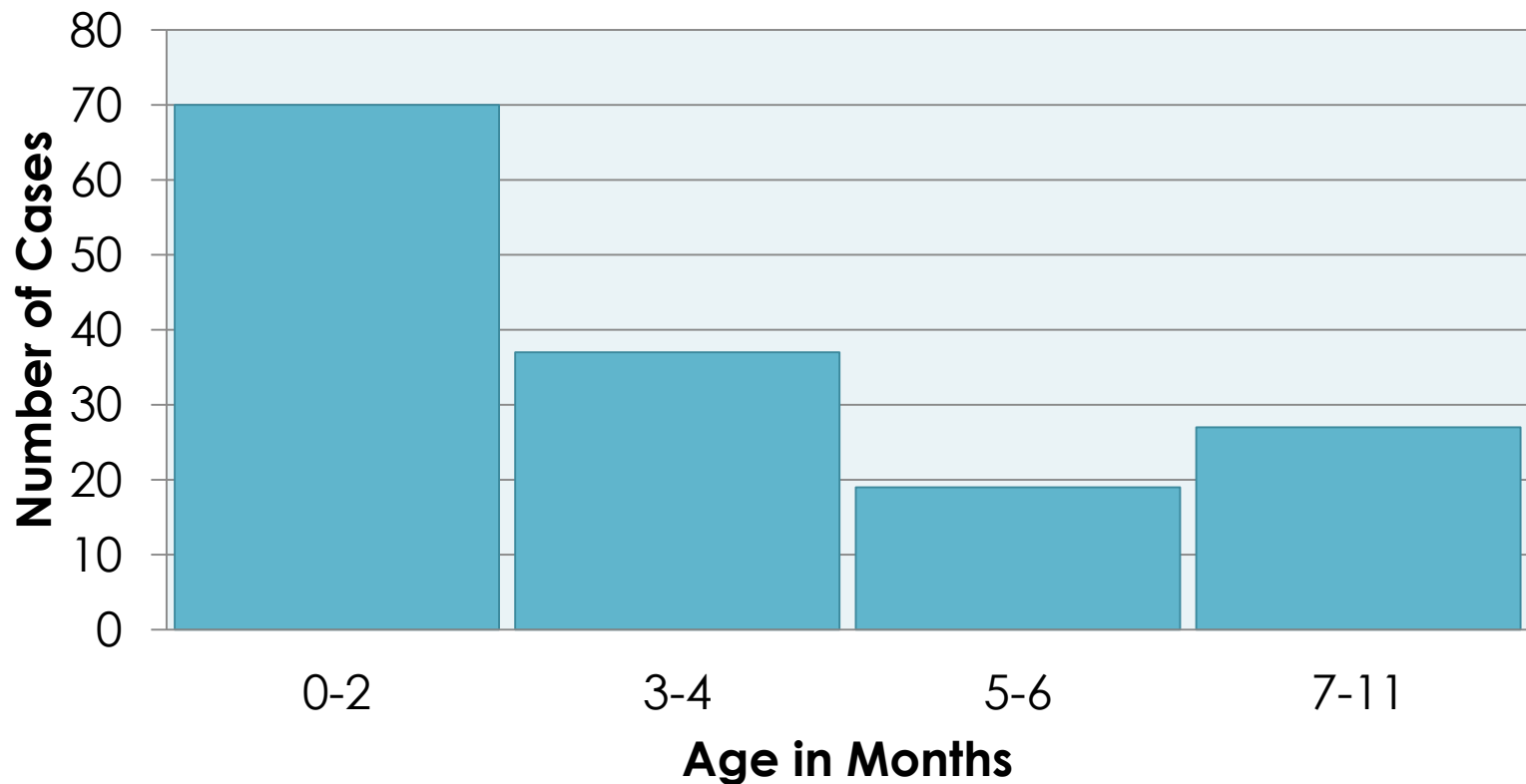
# VACCINE PREVENTABLE DISEASES 2009-2010



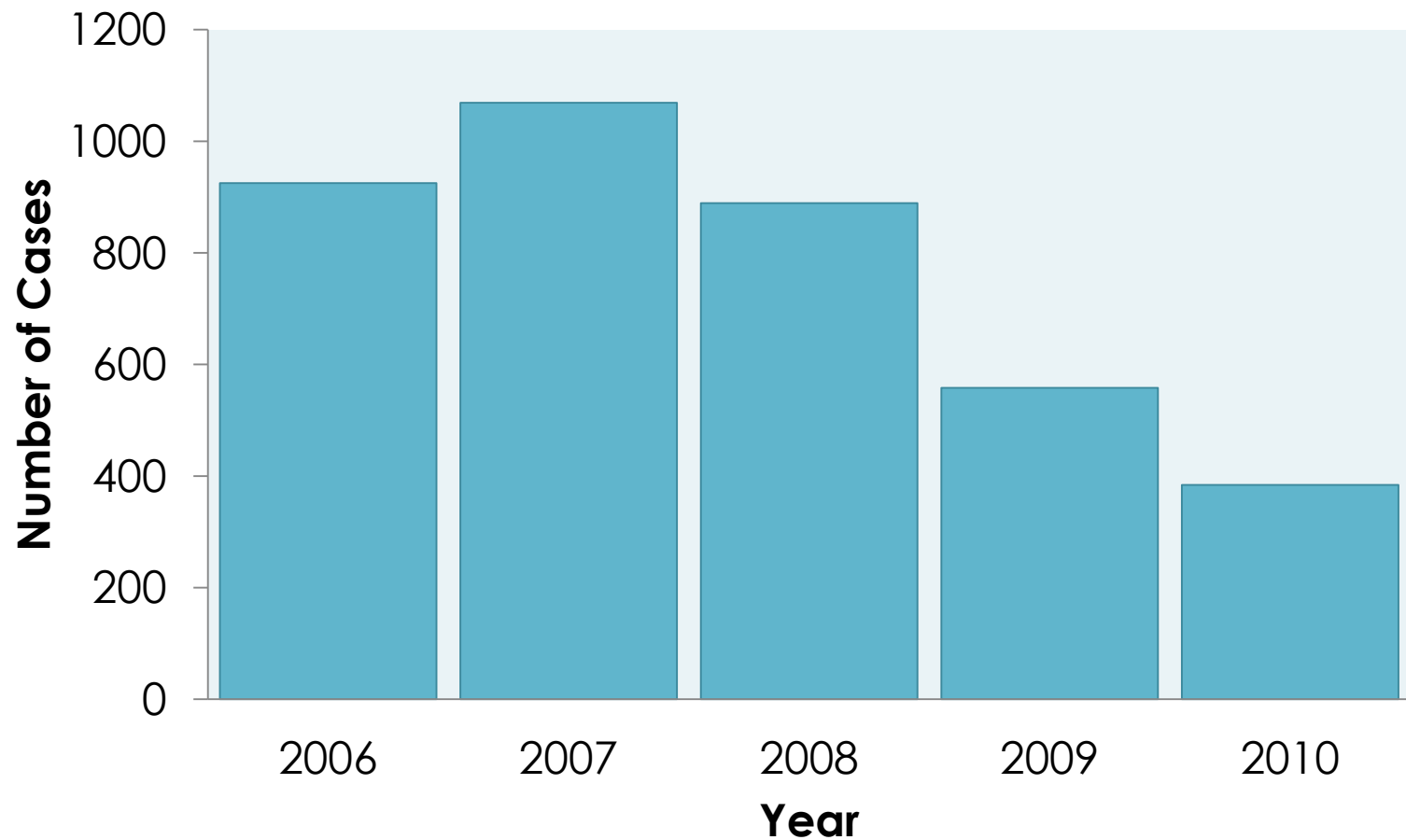
# Pertussis Incidence in US and Kansas: 2006-2010



# Pertussis Cases Among Infants: 2006-2010



# Confirmed and Probable Varicella Cases: 2006-2010





# Measles Outbreak - 2011

# Measles Outbreak Associated with a Daycare and Unvaccinated siblings

- Index Case (Sibling #1)
  - > Unvaccinated 15 year old
  - > 4/16 onset of symptoms
  - > 4/20 onset of rash
  - > Visited
    - 1 physician's office, 2 emergency departments
  - > Hospitalized on 4/22
  - > Measles IgM positive on 4/24 and reported to KDHE on 4/25
  - > Visited Daycare where Mother worked

# Measles – All in the Family

- Siblings #2 and #3
  - > Siblings of index case
  - > Both unvaccinated
  - > Received MMR on 4/27
  - > Onset of initial symptoms on 4/29
  - > Onset of rash on 4/30
- All three siblings were positive for measles by PCR – genotype D4

# Measles – The Daycare Connection

- On 5/25 another measles case was reported to KDHE
- Serology, both IgG and IgM were both positive in an unvaccinated 10 month old
- New index case
  - Onset of symptoms – 3/20/11
  - Onset of rash – 3/25/11
  - Hospitalized on 3/26/11
  - Diagnosed with “Viral Infection”
  - Measles never considered
  - Parents were physicians
  - Attended daycare where sibling #1 had visited

# Measles – Additional Cases at the Daycare

## ● Case #5

- > 2 month old
- > Onset of Symptoms - 4/2/2011
- > Onset of Rash - 4/4/2011
- > Visited HCP
- > Diagnosis “Viral Infection”

## ● Case #6

- > 7 month old
- > Onset of Symptoms - 4/17/2011
- > Onset of Rash - 4/20/2011
- > Hospitalized on 4/21/11
- > Diagnosis “Viral Infection”

# Summary

- True index case is unknown
- Transmission occurred at the daycare
  - > Two infants
  - > Unvaccinated 15 year old
- Transmission occurred from the unvaccinated 15 year old to her unvaccinated siblings
- 50% were hospitalized
- No other cases have been identified or reported

# Perinatal Hepatitis B

To Protect the Health and Environment of all Kansans by Promoting Responsible Choices



# Perinatal Hepatitis B Prevention Program

- Funded by the CDC
- Goals:
  - Identify hepatitis B-positive pregnant women
  - Ensure adherence to the vaccine recommendations and post-vaccination serological testing for the infant
  - Provide education



# Hepatitis B in Kansas

- KDHE identifies 40 - 55 pregnant hepatitis B-positive women per year
  - Primary method of surveillance is lab based
- CDC estimates 102 - 152 infants born to HBV+ women per year in Kansas\*
  - Difference of 47 - 112 cases
- We identify less than 50% of the infants  
CDC projects we have

\*Based on 2006 data

# How Do We Improve?

- Ensure follow-up for all women of child bearing age who test positive for hepatitis B
- Continue birth certificate surveillance
- Capture/Recapture Program

# Questions/Comments

For more information on any of these programs contact 877-427-7317.